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An isolated polypeptide selected from the group consisting of:

- a polypeptide comprising the amino acid sequence of SEQ ID NO:1, a)
- a polypeptide comprising a naturally occurring amino acid sequence at least 90% b) identical to the amino acid sequence of SEQ ID NO:1,
- a biologically active fragment of a polypeptide having the amino acid sequence of c) SEO ID NO:1, and
- an immunogenic fragment of a polypeptide having the amino acid sequence of d) SEQ ID NO:1.
- 2. An isolated polypeptide of claim 1 selected from the group consisting of SEQ ID NO:1-2.
  - 3. An isolated polynucleotide encoding a polypeptide of claim 1.
  - 4. An isolated polynucleotide encoding a polypeptide of claim 2.
- 5. An isolated polynucleotide of claim 4 selected from the group consisting of SEQ ID NO:3-4. 20
  - 6. A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.
    - 7. A cell transformed with a recombinant polynucleotide of claim 6.
    - 8. A transgenic organism comprising a recombinant polynucleotide of claim 6.
    - 9. A method of producing a polypeptide of claim 1, the method comprising:
    - culturing a cell under conditions suitable for expression of the polypeptide, a) wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and

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- b) recovering the polypeptide so expressed.
- 10. A method of claim 9, wherein the polypeptide has an amino acid sequence selected from the group consisting of SEQ ID NO:1-2.
- 11. An isolated antibody which specifically binds to a polypeptide selected from the group consisting of:
  - a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,
  - b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid sequence g of SEQ ID NO:1,
  - a biologically active fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, and
  - an immunogenic fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1.
  - 12. An isolated polynucleotide selected from the group consisting of:
  - a) a polynucleotide comprising the polynucleotide sequence of SEQ ID NO:3,
  - b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to the polynucleotide sequence of SEQ ID NO:3,
  - c) a polynucleotide complementary to a polynucleotide of a),
  - d) a polynucleotide complementary to a polynucleotide of b), and
  - e) an RNA equivalent of a)-d).
- 13. An isolated polynucleotide comprising at least 60 contiguous nucleotides of a
  polynucleotide of claim 12.
  - 14. A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 12, the method comprising:
  - a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and

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- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.
- 15. A method of claim 14, wherein the probe comprises at least 60 contiguous nucleotides.
  - 16. A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 12, the method comprising:
    - a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
    - b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.
  - 17. A composition comprising a polypeptide of claim 1 and a pharmaceutically acceptable excipient.
  - 18. A composition of claim 17, wherein the polypeptide has an amino acid sequence selected from the group consisting of SEQ ID NO:1-2.
  - 19. A method for treating a disease or condition associated with decreased expression of functional PGAMP, comprising administering to a patient in need of such treatment the composition of claim 17.
- 20. A method of screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:
  - a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
  - b) detecting agonist activity in the sample.
- 21. A composition comprising an agonist compound identified by a method of claim 20 and a pharmaceutically acceptable excipient.
  - 22. A method for treating a disease or condition associated with decreased expression of functional PGAMP, comprising administering to a patient in need of such treatment a

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composition of claim 21.

- 23. A method of screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:
  - a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
  - b) detecting antagonist activity in the sample.
- 24. A composition comprising an antagonist compound identified by a method of claim 23 and a pharmaceutically acceptable excipient.
- 25. A method for treating a disease or condition associated with overexpression of functional PGAMP, comprising administering to a patient in need of such treatment a composition of claim 24.
- 26. A method of screening for a compound that specifically binds to the polypeptide of claim 1, the method comprising:
  - combining the polypeptide of claim 1 with at least one test compound under suitable conditions, and
  - b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.
- 27. A method of screening for a compound that modulates the activity of the polypeptide of claim 1, the method comprising:
  - a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1,
  - b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and
  - c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim 1.

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- 28. A method of screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 5, the method comprising:
  - a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,
  - b) detecting altered expression of the target polynucleotide, and
  - c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.
  - 29. A method of assessing toxicity of a test compound, the method comprising:
  - a) treating a biological sample containing nucleic acids with the test compound,
  - b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 12 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 12 or fragment thereof,
  - c) quantifying the amount of hybridization complex, and
  - comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.
- 30. A diagnostic test for a condition or disease associated with the expression of PGAMP in a biological sample, the method comprising:
  - a) combining the biological sample with an antibody of claim 11, under conditions suitable for the antibody to bind the polypeptide and form an antibody:polypeptide complex, and
  - b) detecting the complex, wherein the presence of the complex correlates with the presence of the polypeptide in the biological sample.
  - 31. The antibody of claim 11, wherein the antibody is:
  - a) a chimeric antibody,
  - b) a single chain antibody,

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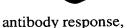


- c) a Fab fragment,
- d) a F(ab')<sub>2</sub> fragment, or
- e) a humanized antibody.
- 32. A composition comprising an antibody of claim 11 and an acceptable excipient.
- 33. A method of diagnosing a condition or disease associated with the expression of PGAMP in a subject, comprising administering to said subject an effective amount of the composition of claim 32.
  - 34. A composition of claim 32, wherein the antibody is labeled.
- 35. A method of diagnosing a condition or disease associated with the expression of PGAMP in a subject, comprising administering to said subject an effective amount of the composition of claim 34.
- 36. A method of preparing a polyclonal antibody with the specificity of the antibody of claim 11, the method comprising:
  - a) immunizing an animal with a polypeptide having the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,
  - b) isolating antibodies from said animal, and
  - c) screening the isolated antibodies with the polypeptide, thereby identifying a polyclonal antibody which binds specifically to a polypeptide having the amino acid sequence of SEQ ID NO:1.
  - 37. A polyclonal antibody produced by a method of claim 36.
  - 38. A composition comprising the polyclonal antibody of claim 37 and a suitable carrier.
- 39. A method of making a monoclonal antibody with the specificity of the antibody of claim 11, the method comprising:
  - a) immunizing an animal with a polypeptide having the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an



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- b) isolating antibody producing cells from the animal,
- c) fusing the antibody producing cells with immortalized cells to form monoclonal antibody-producing hybridoma cells,
- d) culturing the hybridoma cells, and
- e) isolating from the culture monoclonal antibody which binds specifically to a polypeptide having the amino acid sequence of SEQ ID NO:1.
- 40. A monoclonal antibody produced by a method of claim 39.
- 41. A composition comprising the monoclonal antibody of claim 40 and a suitable carrier.
- 42. The antibody of claim 11, wherein the antibody is produced by screening a Fab expression library.
- 43. The antibody of claim 11, wherein the antibody is produced by screening a recombinant immunoglobulin library.
- A method of detecting a polypeptide having the amino acid sequence of SEQ ID NO:1 in a sample, the method comprising:
  - a) incubating the antibody of claim 11 with a sample under conditions to allow specific binding of the antibody and the polypeptide, and
  - b) detecting specific binding, wherein specific binding indicates the presence of a polypeptide having the amino acid sequence of SEQ ID NO:1 in the sample.
- 45. A method of purifying a polypeptide having the amino acid sequence of SEQ ID NO:1 from a sample, the method comprising:
  - a) incubating the antibody of claim 11 with a sample under conditions to allow specific binding of the antibody and the polypeptide, and
  - b) separating the antibody from the sample and obtaining the purified polypeptide having the amino acid sequence of SEQ ID NO:1.
  - 46. A microarray wherein at least one element of the microarray is a polynucleotide of

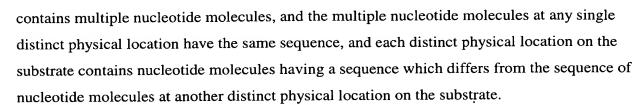
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- 47. A method of generating a transcript image of a sample which contains polynucleotides, the method comprising:
  - a) labeling the polynucleotides of the sample,
  - b) contacting the elements of the microarray of claim 46 with the labeled polynucleotides of the sample under conditions suitable for the formation of a hybridization complex, and
  - c) quantifying the expression of the polynucleotides in the sample.
- 48. An array comprising different nucleotide molecules affixed in distinct physical locations on a solid substrate, wherein at least one of said nucleotide molecules comprises a first oligonucleotide or polynucleotide sequence specifically hybridizable with at least 30 contiguous nucleotides of a target polynucleotide, and wherein said target polynucleotide is a polynucleotide of claim 12.
- 49. An array of claim 48, wherein said first oligonucleotide or polynucleotide sequence is completely complementary to at least 30 contiguous nucleotides of said target polynucleotide.
- 50. An array of claim 48, wherein said first oligonucleotide or polynucleotide sequence is completely complementary to at least 60 contiguous nucleotides of said target polynucleotide.
  - 51. An array of claim 48, wherein said first oligonucleotide or polynucleotide sequence is completely complementary to said target polynucleotide.
    - 52. An array of claim 48, which is a microarray.
- 53. An array of claim 48, further comprising said target polynucleotide hybridized to a nucleotide molecule comprising said first oligonucleotide or polynucleotide sequence.
- 54. An array of claim 48, wherein a linker joins at least one of said nucleotide molecules to said solid substrate.
  - 55. An array of claim 48, wherein each distinct physical location on the substrate



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- 56. A polypeptide of claim 1, comprising the amino acid sequence of SEQ ID NO:1.
- 57. A polypeptide of claim 1, comprising the amino acid sequence of SEQ ID NO:2.
- 58. A polynucleotide of claim 12, comprising the polynucleotide sequence of SEQ ID NO:3.
- 59. A polynucleotide of claim 12, comprising the polynucleotide sequence of SEQ ID NO:4.